

REMARKS

By the present amendment, independent claim 1 has been amended to further clarify the concepts of the present invention. In particular, claim 1 has been amended to incorporate the subject matter of dependent claims 5 and 6 therein, as well as the disclosure at line 25 of page 25 of the subject specification, such that claim 1 now defines a film for metallization composed of a polypropylene-based resin composition for metallized films, where the film satisfies a mathematical relationship (a) between the heat seal temperature and the tensile modulus of the film. In addition, dependent claims 3 and 7 have been amended to be consistent with amended claim 1 and dependent claims 5, 6, 8 and 10-12 have been canceled. Entry of the above amendment is respectfully requested.

In the Action, claims 1, 3, 5-8 and 10-12 again were rejected under 35 USC § 102(b) as being anticipated by, or alternatively, under 35 USC 103(a) as being obvious over, the patent to Chatterjee. As before, it was alleged in making this rejection that the Chatterjee patent teaches a resin composition for metallized films formed of components which fall within the scope of the noted claims. In so doing, it was asserted that at least some of the properties (a-1) through (a-6) of the propylene random copolymer (A) and the recited properties for polyethylene resin (B), although not specifically disclosed, would be inherent in the compositions according to the cited patent. Reconsideration of this rejection in view

of the above claim amendments and the following comments is respectfully requested.

The subject invention relates to a film for metallization composed of a polypropylene-based resin composition for metallized films where the composition comprises, among other things, a propylene random copolymer (A) produced in the presence of a metallocene catalyst, which has the properties (a-1) to (a-6) as recited in claim 1. It is to be particularly noted that each value (a-1) through (a-6) as defined in the present claims is important in the subject films. In addition, as mentioned above, independent claim 1 has been amended herein to further clarify the concepts of the present invention by defining that the film for metallization composed of a polypropylene-based resin composition satisfies a mathematical relationship between the heat seal temperature and the tensile modulus of the film as set forth in formula (a).

Among other things, this latter feature of the mathematical relationship according to formula (a) for the subject film for metallization composed of a polypropylene-based resin composition is quite important for the purposes of the film. It is set forth in the subject specification at lines 2-6 of page four that it is an object of the present invention to provide a metallized film excellent in processability, stiffness, heat-sealing property, resistance to blocking and surface scratching, containing a limited quantity of solubles, and excellent in adhesion properties to the metallizing film and printability and delamination characteristics of the metallized surface. For further improved stiffness and heat-sealing property, as is

set forth on page 25 of the subject specification, the film preferably satisfies the mathematical relationship according to formula (a) between the heat seal temperature at a specific load and tensile modulus. With improved stiffness and heat sealing property, the metallized films in accordance with the present invention are particularly adapted for use in wrapping food and medical products.

It is therefore submitted that the subject films for metallization composed of a polypropylene-based resin composition distinguish over that taught by the cited Chatterjee patent. In particular, it is urged that amended claim 1 now defining that the film satisfies the mathematical relationship according to formula (a) between the heat seal temperature at a specific load and tensile modulus helps to distinguish the claims over the cited patent. It is important that copolymer (A) satisfies all of requirements (a-1) to (a-6) and formula (a) since, even if one of these requirements is not satisfied, the resultant film is not suitable as a surface to be metallized.

In support of the above assertion that the properties of the subject film and resin composition are important, the Declaration Under 37 CFR § 1.132 of Mr. Yasunori Nakamura dated December 13, 2005, has been previously submitted, the Declaration being primarily addressed to the significance of requirements (a-1) through (a-6) relative to the teachings of the Chatterjee patent. With regard to the significance of the mathematical relationship between the heat seal temperature and tensile modulus defined

by formula (a) as is now recited in claim 1, attention is directed to the experimental data contained on page 8 of the previously mentioned Declaration. This page of the Declaration is enclosed with this Amendment and includes additional handwritten information.

In particular, Table F of the enclosed page from the Declaration identifies the values for tensile modulus (YM of formula (a)) and HS temperature (HST of formula (a)) for three films made of resin compositions according to the Chatterjee patent (Examples A, D and E) and a film in accordance with the present invention (Example 1). The values for YM and HST for each Example film are then included in formula (a) and a value of  $17[HST] - [YM]$  calculated. The results for each film are set forth in the table at the lower right of the enclosed page from the Declaration.

It is submitted that the above evidence from the Declaration demonstrates the importance of values (a-1) through (a-6) and formula (a) as recited in the present claims. Consequently, it submitted that a film composed of a polypropylene-based resin composition for metallized films which includes the features as defined in amended claim 1 is not taught or suggested by the cited patent to Chatterjee.

For the reasons stated above, withdrawal of the rejection under 35 U.S.C. § 102(b) or 35 U.S.C. § 103(a) and allowance of claims 1, 3 and 7 as amended over the cited Chatterjee patent are respectfully requested.

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OA dated 06/27/06  
Amdt. dated 9/27/06

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP



Donald W. Hanson  
Attorney for Applicants  
Reg. No. 27,133

Atty. Docket No. 030918  
1725 K Street, N.W. Suite 1000  
Washington, D.C. 20006  
(202) 659-2930  
DWH/nk



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Enclosure: Page 8 from Declaration with handwritten notations

Table E

Example No.	Processability	Primary film		
		Haze	Outer appearances	Blocking properties
	-	%	-	g/10 cm <sup>2</sup>
A	○	3.4	○	800
D	○	3.2	○	1100
E	○	2.8	○	900
1	◎	2.5	○	500

Table F

Example No.	Primary film		
	Tensile modulus	HS temperature	Wound condition
	Mpa	°C	-
A	590	140	H
D	560	136	H
E	580	134	H
1	740	129	○

Table G

Example No.	Metallized film (metallization suitability)				
	ΔG	Adhesion properties	Wetting tension	Peel strength	Wound condition
	%	-	dyne/cm	g/15 mm	
A	50		36	70	H
D	50	H	32	30	H
E	50	H	37	100	H
1	40	○	40	125	○

Tables E, F and G clearly show that the properties of the films prepared using the above-mentioned selected copolymers (i) to (iii) are poor, as compared to those of the

From Table F - Calculations

$$\begin{aligned}
 A & 17 \left( \frac{HS}{140} \right) = 2380 - \frac{YM}{590} = \frac{value}{1790} \\
 D & 17(136) = 2312 - 560 = 1752 \\
 E & 17(134) = 2278 - 580 = 1698 \\
 1 & 17(129) = 2193 - 740 = 1453
 \end{aligned}$$

Formula (a)

$$1165 \leq 17 \times [HS] - [YM] \leq 1670$$

value of  $17 \times [HS] - [YM]$

$$\begin{aligned}
 A & 1790 \\
 D & 1752 \\
 E & 1698 \\
 1 & 1453
 \end{aligned}$$